Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

PS500

Version number: 4.0
Scodix p/n: DCH-0027-02
Replaces version of: 10.05.2018 (3)

Revision: 16.09.2018

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name	**PS500**
Scodix p/n	HIK-0022-01
Registration number (REACH)	not relevant (mixture)

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	UV curable overprint clear polymer for use with Scodix digital UV Presses

1.3 Details of the supplier of the safety data sheet

Scodix Ltd.
13 Amal St., Park Afeq
IL-48092 Rosh Ha'ayin
Israel

Telephone: +972-3-9033371
e-mail: benji.r@scodix.com

e-mail (competent person)	benji.r@scodix.com (Benji Ruhm)

1.4 Emergency telephone number

Emergency information service	This number is only available during the following office hours: Mon - Thu, Sun 09:00 AM - 06:00 PM

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

Acute Tox. 4	H312
Skin Irrit. 2	H315
Eye Dam. 1	H318
Skin Sens. 1A	H317
Repr. 2	H361f
Aquatic Chronic 2	H411

For full text of abbreviations: see SECTION 16.

The most important adverse physicochemical, human health and environmental effects

Spillage and fire water can cause pollution of watercourses.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

- Signal word: danger
- Pictograms

GHS05, GHS07, GHS08, GHS09

- Hazard statements

H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H361f	Suspected of damaging fertility.
H411	Toxic to aquatic life with long lasting effects.

- Precautionary statements

P201	Obtain special instructions before use.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/doctor.
P362+P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.
P501	Dispose of contents/container to industrial combustion plant.

- Hazardous ingredients for labelling: 2-(2-Ethoxyethoxy)ethyl acrylate, Oxybis(methyl-2,1-ethanediyl) diacrylate, diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide, 3-Methyl-1,5-pentanediyl diacrylate, amine-multifunctional acrylate based oligomer, Propylidynetrimethanol, ethoxylated, esters with acrylic acid, hexamethylene diacrylate, 2-hydroxy-3-phenoxypropyl acrylate, 2,6-bis(1,1-dimethylethyl)-4-(phenylenemethylene)cyclohexa-2,5-dien-1-one

2.3 Other hazards

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

SECTION 3: Composition/information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

Name of substance	Identifier		Wt%	Classification acc. to GHS
Oxybis(methyl-2,1-ethanediyl) diacrylate	CAS No EC No	57472-68-1 260-754-3	30 – 50	Skin Irrit. 2 / H315 Eye Dam. 1 / H318 Skin Sens. 1 / H317
2-(2-Ethoxyethoxy)ethyl acrylate	CAS No EC No	7328-17-8 230-811-7	15 – 30	Acute Tox. 4 / H302 Acute Tox. 3 / H311 Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Skin Sens. 1A / H317 Aquatic Chronic 2 / H411
amine-multifunctional acrylate based oligomer	CAS No EC No	N/A N/A	3.5 – 10.5	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Skin Sens. 1 / H317 Aquatic Chronic 3 / H412

Name of substance	Identifier		Wt%	Classification acc. to GHS
Oligoamine resin	CAS No EC No	N/A N/A	1.8 – 9	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319
diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide	CAS No EC No	75980-60-8 278-355-8	3 – 6	Skin Sens. 1B / H317 Repr. 2 / H361f Aquatic Chronic 2 / H411
2-[[(butylamino)carbonyl]oxy]ethyl acrylate	CAS No	63225-53-6	1.25 – 7.5	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319
2-hydroxy-1-(4-(4-(2-hydroxy-2-methylpropionyl)benzyl)phenyl)-2-methylpropan-1-one	CAS No EC No	474510-57-1 444-860-9	1 – 3	STOT RE 2 / H373 Aquatic Acute 1 / H400 Aquatic Chronic 1 / H410
2-hydroxy-3-phenoxypropyl acrylate	CAS No	16969-10-1	2 – 5	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Skin Sens. 1 / H317
3-Methyl-1,5-pentanediyl diacrylate	CAS No EC No	64194-22-5 264-727-7	1.25 – 4.5	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Skin Sens. 1A / H317 Aquatic Chronic 3 / H412
Propylidynetrimethanol, ethoxylated, esters with acrylic acid	CAS No EC No	28961-43-5 500-066-5	0.7 – 2.25	Eye Irrit. 2 / H319 Skin Sens. 1 / H317
Glycerol, Propoxylated esters with acrylic acid	CAS No EC No	52408-84-1 500-114-5	0.177 – 0.6	Eye Irrit. 2 / H319 Skin Sens. 1 / H317
hexamethylene diacrylate	CAS No EC No	13048-33-4 235-921-9	0.02 – 0.5	Skin Irrit. 2 / H315 Eye Irrit. 2 / H319 Skin Sens. 1 / H317
2,6-bis(1,1-dimethylethyl)-4-(phenylenemethylene)cyclohexa-2,5-dien-1-one	CAS No EC No	7078-98-0 429-460-4	0.02 – 0.12	Skin Sens. 1 / H317 Aquatic Chronic 4 / H413

For full text of abbreviations: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air. Get medical advice/attention.

Following skin contact

Take off immediately all contaminated clothing. Get medical advice/attention. Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart. Get medical advice/attention.

Following ingestion

Do NOT induce vomiting. In case of unconsciousness place person in the recovery position. Never give anything by mouth. Rinse mouth with water (only if the person is conscious).

4.2 Most important symptoms and effects, both acute and delayed

Most important symptoms and effects, both acute and delayed: See section 11: Toxicological information.

4.3 Indication of any immediate medical attention and special treatment needed

This information is not available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, BC-powder, Carbon dioxide (CO2)

Unsuitable extinguishing media

Water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO2), Irritating and toxic fumes

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Co-ordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear protective clothing for protection against heat and flame.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety. Avoid breathing dust/fume/gas/mist/vapors/spray. Provide sufficient ventilation.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/spray/gases. Keep away from sources of ignition - No smoking.

6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it. If substance has entered a water course or sewer, inform the responsible authority.

6.3 Methods and material for containment and cleaning up

Advices on how to contain a spill

Covering of drains

Advices on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Recommendations

Avoid contact with skin and eyes. Do not breathe mist/vapors/spray. Keep away from sources of ignition – No smoking.

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feeding stuffs.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed and in a well-ventilated place. Store at temperatures not exceeding 35 °C. Protect from sunlight.

- Packaging compatibilities

Only packaging which are approved (e.g. acc. to ADR) may be used.

7.3 Specific end use(s)

N/A

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

There is no TLV for this product (according to ACGIH)

There is no WEL for this product (according to EH40/2005)

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

Wear appropriate long-sleeved clothing to minimize skin contact.

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use.

- Type of material

NBR: acrylonitrile-butadiene rubber

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance

Physical state	liquid
Color	clear - light yellow
Odor	characteristic

Other safety parameters

pH (value)	not determined
Melting point/freezing point	not determined
Initial boiling point and boiling range	not determined
Flash point	>100 °C
Evaporation rate	not determined
Flammability (solid, gas)	not relevant, (fluid)
Explosive limits	not determined
Vapor pressure	not determined
Density	1.08 $^{g}/_{cm^3}$ at 25 °C
Vapor density	this information is not available
Solubility(ies)	Soluble in ketones (acetone). Insoluble in water and isopropanol

Partition coefficient

- n-octanol/water (log KOW)	this information is not available
Auto-ignition temperature	not determined

Viscosity

- Dynamic viscosity	20 – 50 mPa s at 25 °C

Explosive properties	none
Oxidizing properties	none

9.2 Other information there is no additional information

There is no additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

If heated:

Exothermic polymerization

If exposed to light:

Exothermic polymerization

10.2 Chemical stability

See below "Conditions to avoid".

10.3 Possibility of hazardous reactions

No known hazardous reactions.

10.4 Conditions to avoid

Keep away from heat. UV-radiation/sunlight.

10.5 Incompatible materials

Oxidizers, Reducing agents, Radical-forming initiators, Peroxides, Alkalis

10.6 Hazardous decomposition products

Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Test data are not available for the complete mixture.

Classification procedure

The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification according to GHS (1272/2008/EC, CLP)

Acute toxicity

Harmful in contact with skin.

GHS of the United Nations, annex 4:

- Acute toxicity estimate (ATE)

Dermal 1,553 $^{mg}/_{kg}$

Acute toxicity estimate (ATE) of components of the mixture			
Name of substance	**CAS No**	**Exposure route**	**ATE**
2-(2-Ethoxyethoxy)ethyl acrylate	7328-17-8	oral	1,860 $^{mg}/_{kg}$
2-(2-Ethoxyethoxy)ethyl acrylate	7328-17-8	dermal	≥400 $^{mg}/_{kg}$

Acute toxicity of components of the mixture					
Name of substance	**CAS No**	**Exposure route**	**Endpoint**	**Value**	**Species**
2-(2-Ethoxyethoxy)ethyl acrylate	7328-17-8	oral	LD50	1,860 $^{mg}/_{kg}$	rat
2-(2-Ethoxyethoxy)ethyl acrylate	7328-17-8	dermal	LD50	≥400 – ≤2,000 $^{mg}/_{kg}$	rat

Skin corrosion/irritation
Causes skin irritation.

Serious eye damage/eye irritation
Causes serious eye damage.

Respiratory or skin sensitization
May cause an allergic skin reaction.

Germ cell mutagenicity
Shall not be classified as germ cell mutagenic.

Carcinogenicity
Shall not be classified as carcinogenic.

Reproductive toxicity
Suspected of damaging fertility.

Specific target organ toxicity - single exposure
Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure
Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard
Shall not be classified as presenting an aspiration hazard.

SECTION 12: Ecological information

12.1 Toxicity
Toxic to aquatic life with long lasting effects.

Aquatic toxicity (acute) of components of the mixture					
Name of substance	**CAS No**	**Endpoint**	**Value**	**Species**	**Exposure time**
2-(2-Ethoxyethoxy)ethyl acrylate	7328-17-8	LC50	>2.5 $^{mg}/_{l}$	fish	96 h

Aquatic toxicity (acute) of components of the mixture					
Name of substance	**CAS No**	**Endpoint**	**Value**	**Species**	**Exposure time**
2-(2-Ethoxyethoxy)ethyl acrylate	7328-17-8	EC50	90 $^{mg}/_{l}$	aquatic invertebrates	48 h
2-(2-Ethoxyethoxy)ethyl acrylate	7328-17-8	ErC50	<10 $^{mg}/_{l}$	algae	72 h

Aquatic toxicity (chronic) of components of the mixture					
Name of substance	**CAS No**	**Endpoint**	**Value**	**Species**	**Exposure time**
2-(2-Ethoxyethoxy)ethyl acrylate	7328-17-8	EC50	770 $^{mg}/_{l}$	microorganisms	3 h

12.2 Persistence and degradability
Data are not available.

12.3 Bioaccumulative potential
Data are not available.

12.4 Mobility in soil
Data are not available.

12.5 Results of PBT and vPvB assessment
Data are not available.

12.6 Other adverse effects
Endocrine disrupting potential

None of the ingredients are listed.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packaging

It is a dangerous waste; only packaging which are approved (e.g. acc. to ADR) may be used. Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

SECTION 14: Transport information

Allowed shipping temperatures are -20°C to 60°C

14.1 UN number	3082
14.2 UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Technical name (hazardous ingredients)	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide, 2-(2-Ethoxyethoxy)ethyl acrylate
14.3 Transport hazard class(es)	
Class	9 (environmentally hazardous)
14.4 Packing group	III (substance presenting low danger)
14.5 Environmental hazards	hazardous to the aquatic environment
Environmentally hazardous substance (aquatic environment)	diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide, 2-(2-Ethoxyethoxy)ethyl acrylate

14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

The cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

UN number	3082
Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Class	9
Classification code	M6
Packing group	III
Danger label(s)	9, fish and tree

Environmental hazards	yes (hazardous to the aquatic environment)
Special provisions (SP)	274, 335, 375, 601
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
Transport category (TC)	3
Tunnel restriction code (TRC)	-
Hazard identification No	90
Emergency Action Code	3Z

International Maritime Dangerous Goods Code (IMDG)

UN number	3082

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.
Class	9
Marine pollutant	yes (hazardous to the aquatic environment)
Packing group	III
Danger label(s)	9, fish and tree

Special provisions (SP)	274, 335, 969
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
EmS	F-A, S-F
Stowage category	A

International Civil Aviation Organization (ICAO-IATA/DGR)

UN number	3082
Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.
Class	9
Environmental hazards	yes (hazardous to the aquatic environment)
Packing group	III
Danger label(s)	9, fish and tree

Special provisions (SP)	A97, A158, A197
Excepted quantities (EQ)	E1
Limited quantities (LQ)	30 kg

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

There is no additional information.

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
Acute Tox.	Acute toxicity
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by In-land Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
Aquatic Acute	Hazardous to the aquatic environment - acute hazard
Aquatic Chronic	Hazardous to the aquatic environment - chronic hazard
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures
DGR	Dangerous Goods Regulations (see IATA/DGR)
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of "Marine Pollutant")
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
REACH	Registration, Evaluation, Authorization and Restriction of Chemicals
Repr.	Reproductive toxicity
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
Skin Corr.	Corrosive to skin
Skin Irrit.	Irritant to skin
Skin Sens.	Skin sensitization
STOT RE	Specific target organ toxicity - repeated exposure

Abbr.	Descriptions of used abbreviations
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures. Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU.

Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.
Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H361f	Suspected of damaging fertility.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.